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PTO/SB/05 (03-01)
Approved for use through 10/31/2002. OMB 0651-0032

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

First Inventor

Title

Express Mail Label No.

John E. Schommer

WATER Conserving and Cleaning Apparatus

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

- ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
- ☐ Applicant claims small entity status. *NA*
See 37 CFR 1.27.
- ☒ Specification [Total Pages 36]
(preferred arrangement set forth below)
 - Descriptive title of the invention ☒
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention ☒
 - Brief Summary of the Invention ☒
 - Brief Description of the Drawings (if filed) ☒
 - Detailed Description ☒
 - Claim(s) ☒
 - Abstract of the Disclosure ☒
- ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 5]
- ☒ Oath or Declaration [Total Pages 41]
 - ☒ Newly executed (original or copy)
 - ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
- ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

- ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
- Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - ☐ Computer Readable Form (CRF)
 - Specification Sequence Listing on.
 - ☐ CD-ROM or CD-R (2 copies); or
 - ☐ paper
 - ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

- ☐ Assignment Papers (cover sheet & document(s))
- ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
- ☐ English Translation Document (if applicable)
- ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
- ☐ Preliminary Amendment
- ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
- ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
- ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
- ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.

Prior application information: Examiner Group Art Unit:

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

<input type="checkbox"/> Customer Number or Bar Code Label	(Insert Customer No. or Attach bar code label here)	or <input checked="" type="checkbox"/> Correspondence address below
Name	George T. Parsons	
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Name (Print/Type)	George T. Parsons	Registration No. (Attorney/Agent)	39,690
Signature	George T. Parsons	Date	July 6, 2001

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$)391.00

Complete if Known

Application Number	
Filing Date	July 6, 2001
First Named Inventor	John E. Schommer
Examiner Name	
Group Art Unit	
Attorney Docket No.	

METHOD OF PAYMENT

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:
- Deposit Account Number
- Deposit Account Name
- ☐ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
- ☐ Applicant claims small entity status See 37 CFR 1.27
2. ☒ Payment Enclosed:
- ☒ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE					
Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid		
101 710	201 355	Utility filing fee	355		
106 320	206 160	Design filing fee			
107 490	207 245	Plant filing fee			
108 710	208 355	Reissue filing fee			
114 150	214 75	Provisional filing fee			
SUBTOTAL (1)			(\$) <u>355.00</u>		

2. EXTRA CLAIM FEES

Total Claims 24 - 20** = 4 X 9 = 36

Independent Claims - 3** = 0 X 0 = 0

Multiple Dependent 0 = 0

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
103 18	203 9	Claims in excess of 20
102 80	202 40	Independent claims in excess of 3
104 270	204 135	Multiple dependent claim, if not paid
109 80	209 40	** Reissue independent claims over original patent
110 18	210 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)391.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES					
Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid		
105 130	205 65	Surcharge - late filing fee or oath			
127 50	227 25	Surcharge - late provisional filing fee or cover sheet			
139 130	139 130	Non-English specification			
147 2,520	147 2,520	For filing a request for ex parte reexamination			
112 920*	112 920*	Requesting publication of SIR prior to Examiner action			
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action			
115 110	215 55	Extension for reply within first month			
116 390	216 195	Extension for reply within second month			
117 890	217 445	Extension for reply within third month			
118 1,390	218 695	Extension for reply within fourth month			
128 1,890	228 945	Extension for reply within fifth month			
119 310	219 155	Notice of Appeal			
120 310	220 155	Filing a brief in support of an appeal			
121 270	221 135	Request for oral hearing			
138 1,510	138 1,510	Petition to institute a public use proceeding			
140 110	240 55	Petition to revive - unavoidable			
141 1,240	241 620	Petition to revive - unintentional			
142 1,240	242 620	Utility issue fee (or reissue)			
143 440	243 220	Design issue fee			
144 600	244 300	Plant issue fee			
122 130	122 130	Petitions to the Commissioner			
123 50	123 50	Processing fee under 37 CFR 1.17(q)			
126 180	126 180	Submission of information Disclosure Stmt			
581 40	581 40	Recording each patent assignment per property (times number of properties)			
146 710	246 355	Filing a submission after final rejection (37 CFR § 1.129(a))			
149 710	249 355	For each additional invention to be examined (37 CFR § 1.129(b))			
179 710	279 355	Request for Continued Examination (RCE)			
169 900	169 900	Request for expedited examination of a design application			
Other fee (specify) _____					
SUBTOTAL (3)			(\$) <u>0</u>		

*Reduced by Basic Filing Fee Paid

SUBMITTED BY

Name (Print/Type)	GEORGE T. PARSONS	Registration No. (Attorney/Agent)	34,690	Telephone	619-267-4760
Signature	George T. Parsons	Date	July 6, 2001		

WARNING/Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

**Assistant Commissioner for Patents
Washington, D.C. 20231**

on July 6, 2001
Date


Signature

GEORGE T. PARSONS
Typed or printed name of person of signing Certificate
(619) 267-4760

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

- | | |
|-----------------------------|--|
| 1. Fee transmittal form | 6. Power of attorney |
| 2. 2 checks | 7. IDS |
| 3. Specification (36 pages) | 8. two IDS citations (patents) 12 pp |
| 4. Drawings (5 sheets) | 9. Return Receipt Post Card. |
| 5. Declaration | 10. CERTIFICATE OF MAILING |
| | + UTILITY PATENT APPLICATION TRANSMITTAL |
| | + FEE DETERMINATION RECORD |

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09901155-071001

PATENT APPLICATION FEE DETERMINATION RECORD

Application or Docket Number

CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE (37 CFR 1.16(a))		
TOTAL CLAIMS (37 CFR 1.16(c))	24 minus 20 = *	4
INDEPENDENT CLAIMS (37 CFR 1.16(b))	3 minus 3 = *	0
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(d))		0

RATE	FEE
	\$ 355
x \$ 9 =	86
x =	0
+ =	0
TOTAL	391

RATE	FEE
	\$
x \$ =	
x =	
+ =	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))	*	Minus **	=
Independent (37 CFR 1.16(b))	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))			

RATE	ADDITIONAL FEE
x \$ =	
x =	
+ =	
TOTAL	

RATE	ADDITIONAL FEE
x \$ =	
x =	
+ =	
TOTAL	

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))	*	Minus **	=
Independent (37 CFR 1.16(b))	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))			

RATE	ADDITIONAL FEE
x \$ =	
x =	
+ =	
TOTAL	

RATE	ADDITIONAL FEE
x \$ =	
x =	
+ =	
TOTAL	

AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total (37 CFR 1.16(c))	*	Minus **	=
Independent (37 CFR 1.16(b))	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(d))			

RATE	ADDITIONAL FEE
x \$ =	
x =	
+ =	
TOTAL	

RATE	ADDITIONAL FEE
x \$ =	
x =	
+ =	
TOTAL	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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WATER CONSERVING AND CLEANING APPARATUS

Background of the Invention

5 Field of the Invention

10 The present invention relates generally to watering devices. More particularly, the present invention relates to manually operated watering devices used to clean surfaces by using water and air at a predesignated pressure and direction.

Description of the Related Art

15 Manually operated cleaning devices using water are well-known. Devices using many different styles, materials, and performing varying functions have been patented. More specifically, numerous cleaning devices known as water brooms have been invented. The purpose of these devices is generally to clean surfaces, such as tennis courts, driveways, pool decks and commercial sidewalks, patios or parking lots.

20 Unfortunately, patented inventions in this field still exhibit many problems and disadvantages which the present invention has overcome.

Even though previous designs have had some success in overcoming past problems, one long standing problem of prior art devices is an inability to conserve water. Still another problem is that prior art designs include relatively non-durable devices. Yet another problem in the prior art is the lack of flexibility in the design.

Some of the related prior art includes the following U.S. Patents:

Anderberg, et. al., Pat. No. 4,095,746 and Merlin, Pat. No. 4,930,706.

Anderberg discloses a surface cleaning apparatus which "...provides a plurality of overlapping spray patterns..." and also is directed to "...one of said plurality of spray nozzles being mounted at said junction...to deflect liquid flow..." One problem with Anderberg's disclosure is that the nozzles are not protected from damage. Therefore, the nozzles are not durable. A second problem is that no teaching is made to linking highly effective cleaning of surface with dramatic water conservation. The only reference seems to be describing a spray pattern with "...minimizing the volume of water impinging on the surface for cleaning." No novel details are disclosed. Another problem is the lack of a flexible design, preventing accommodating the needs of different users. In fact, Anderberg teaches away from the present invention's novel features.

Merlin discloses "...a fluid spray apparatus with resilient shank

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portion which is compressedly seated in its aperture and a resilient
flange portion ...in pressure sealing engagement.” Primarily Merlin is
directed towards a technique permitting removal of nozzles for cleaning
yet providing for nozzle alignment and sealing once reinstalled. One
5 problem with Merlin’s disclosure is that the nozzles are not protected
from damage. A second problem is that no teaching is made which links
cleaning of a surface with water conservation. Another problem is the
lack of a flexible design, preventing accommodating the needs of different
users. In fact, Merlin teaches away from the present invention.

15
In summary, the cited patents have a multitude of problems and
disadvantages. As is quickly realized, the cited patents disclose attempts
to solve only one or two problems associated with previous cleaning
devices using water. All of them rely solely on a high volume of water at
a high water pressure for cleaning. None use air to assist in cleaning, nor
do any use air to conserve water. One attempts to improve the spray
pattern. Another attempts to provide a nozzle which is easier to clean.
However, problems still exist in the prior art which have not been
addressed to the knowledge of the Applicant. These problems are solved
20 with an elegant, simple, and inexpensive design. In addition, the present
invention solves other problems in the field that have been virtually
ignored.

Therefore, it is an object of the present invention to provide a durable device which will last a long time after many uses. Another object is to provide a device which provides dramatic water conservation features, while still thoroughly cleaning a surface. Still another object is to provide an elegantly simple and inexpensively manufactured design, including a flexible design accommodating the needs of different users and supporting a variety of devices. The Applicant thinks the present invention overcomes many long-standing and even ignored problems and disadvantages of the prior art.

Summary of the Invention

The above-mentioned difficulties and problems of the prior art are overcome by the present invention. The present water conserving and cleaning apparatus' major components include an essentially straight handle of several feet in length, with a hand grip in the vicinity of a distal end, a straight, preferably brass, fixture, and a water flow control lever operably secured to the fixture. The handle is secured on the proximate end to a horizontal member in an inverted "T" configuration. One novel feature is the angle at which the handle is secured to the horizontal member. The specific angle has been determined through testing to be the

preferred for maximum comfort value to the widest group of adults of virtually any age and height. The horizontal member includes a winged jet manifold fixably secured to the proximate end of the handle.

5 The many novel features of the manifold include a flow director which forces an air and water jet stream onto a surface to be cleaned. Another novel feature is a rear wing. The rear wing, integral to the jet manifold, includes a two level cantilevered porch with specifically designed angles and heights to provide optimum air flow and a Venturi effect under the water conserving apparatus. Thus, a minimum of water is required when combined with an air stream to provide maximum pressure at a specific target angle to the surface to be cleaned. Therefore, complete and rapid cleaning is achieved with an order of magnitude savings in water conservation when compared to the prior art. In addition, a cylindrical horizontal length of pipe is integrally manufactured into the manifold. Also, a plurality of spray nozzles are secured along the horizontal length of the pipe at generally equally spaced intervals. Finally, on a rear side of the manifold is movably secured a plurality of wheels.

20 Several embodiments of the present invention demonstrate the design flexibility and adaptability to a variety of surface cleaning uses.

These uses include firehouses, hotels, schools, and boats of all sizes and uses.

These, and other, novel features and advantages of the present invention are set forth more completely in the accompanying drawings and the following description.

Brief Description of the Drawings

Details of the invention, and of the preferred embodiment thereof, will be further understood upon reference to the drawings, wherein closely related elements have the same number but different alphabetical suffixes, and further wherein:

Figure 1a is a perspective view of a prior art device;

Figure 1b is a right elevation view in partial section of the prior art device in Figure 1a, illustrating a portion of a handle, a typical nozzle, and a typical spray pattern;

Figure 2 is a perspective view of one embodiment of the present invention;

Figure 3 is a right elevation view in partial section of the present invention in Figure 2, illustrating a jet manifold protecting a nozzle and directing air and water flow;

Figure 4 is an enlarged detailed partial section of a right elevation view of the present invention of Figure 2;

Figure 5 is an enlarged plan view of the jet manifold of Figure 3;

Figure 6a is an enlarged detailed section view of a cone-shaped water filter inside the handle of the present invention; and

Figure 6b is an enlarged perspective view of the filter.

Detailed Description of the Preferred Embodiments

The above-mentioned difficulties and problems of the prior art are overcome by the present invention. Referring initially to Figure 1a, a perspective view of an invention of the prior art is shown. A typical waterbroom 1 is seen including a horizontal pipe member 2.

Referring next to Figure 1b, a right elevation view in partial section of the prior art device of Figure 1a is shown, illustrating a portion of a handle 3 into which a typical nozzle 4 is secured. In addition, a typical spray pattern 5 from the nozzle 4 is shown.

Referring now to Figure 2, a perspective view of one embodiment of the present invention is shown. A water conserving and cleaning apparatus 10 comprises numerous major components, including